

Circle Fractions

Reporting Category Number and Number Sense

Topic Comparing, ordering, and representing fractions

Materials

- Sets of fraction circles

Vocabulary

fraction, whole, part, numerator, denominator, like denominators, unlike denominators, greater than, less than, equal to, represent

Student/Teacher Actions (what students and teachers should be doing to facilitate learning)

1. Give two sets of fraction circles to each student. Ask students to take out a whole or complete circle. Then, ask them to take out a half. Ask how we could represent this one half as a fraction, gather responses, and write $\frac{1}{2}$ on the board. Ask how they know that it's a half. (Two equal-size pieces make a whole, and this is one of the two pieces.) Ask students to take out another half. Ask them how to represent the two halves as a fraction, gather responses, and write $\frac{2}{2}$ on the board. Make sure students clearly explain their thinking about how to write this. Ask students to take out a third half (the reason each student needs two sets). Ask them how to represent the three halves as a fraction, and write $\frac{3}{2}$ on the board. Finally, ask students to take out a fourth half. Ask them how to represent the four halves as a fraction, and write $\frac{4}{2}$ on the board.
2. Have students point to their fraction pieces and count, "one half, two halves, three halves, four halves." Ask, "How many whole circles do these four halves make?" (2) As students do this activity, be sure to show them how to write the fractions in mixed-number form as well as improper-fraction form. Emphasize that the size of the piece always refers back to the whole as well as how many parts into which the whole has been divided.
3. Discuss the top and bottom numbers of the fractions. Ask the students, "Did you notice a pattern in the top numbers as we counted halves?" (They increased by 1 each time.) Ask, "What did you notice about the bottom numbers as we counted?" (They did not change.)
4. Repeat this activity with fourths, fifths, sixths, eighths, tenths, and twelfths.

Assessment

- **Questions**

- If I bought 3 pizzas and we ate $2\frac{3}{4}$ of them, how would I write this as an improper fraction? How many fourths would I have left over?
- If a candy bar is divided into 12 sections, how many twelfths are in $3\frac{1}{2}$ candy bars?

- **Journal/Writing Prompts**

- Write a letter to someone at home explaining what you learned about improper fractions, such as $\frac{3}{2}$.
- Write three true statements, using the symbols $<$, $>$, or $=$ (e.g., $1\frac{1}{2} = \frac{3}{2}$).

- **Other**

- Give students a fraction or fractions, and have them complete an exit card like the following for each fraction.

Illustration	Mixed
<div style="text-align: center;">Fraction in words.</div>	
Improper Fraction	

Extensions and Connections (for all students)

- Have students draw pictures of area models of fractions (e.g., $\frac{4}{3}$).